REMARKS

The title has been changed to more accurately reflect the claimed invention.

Claims 27-29 and 36-39 have been canceled and new claims 40-45 have been submitted

Claims 20-22, 30, 31 and 35 have been amended to clarify the language of the claims. Additionally, claim 21 has been amended to specify claimed nucleic acid molecule be "at least" 90% identical to one of the listed SEQ ID NO's. Support for this amendment can be found in the specification, for example, on page 36, lines 3-7.

Claim 30 has been amended to specify the claimed nucleic acid molecule encode a protein comprising the amino acid sequence of SEQ ID NO:10, SEQ ID NO:13 or variants at least 95% identical to SEQ ID NO:13. Support for this amendment can be found in the specification, for example, on page 38, lines 13-16.

New claims 40-43 substantially track previous claims 20, 21 and 30 with the exception the new claims are drawn towards nucleic acid molecules "consisting" of the described sequences.

New claims 44-46 are drawn towards fragments of 75, 100 and 150 nucleotides, respectively, of the isolated nucleic acid molecule of claim 40. Support for such fragments can be found in the specification, for example, on page 39, lines 12-20.

In view of the support noted above, Applicants submit no new matter has been entered into the Application.

I. Group Election

The Examiner has restricted the instant Application into 4 groups drawn to DNA encoding a COX protein, COX proteins, antibodies to COX proteins and methods of detecting inhibitors of COX protein activity.

Applicants have elected , without traverse, to prosecute Group I. The claims of Group I, which are drawn to nucleic acid molecules encoding canine COX proteins, include claims 20-35. Applicants have herein canceled claims 27-29 and 36-39. Nucleic acid molecules of Group I include SEQ ID NO:'s 9, 11, 12, 14, 15 and 16. Proteins encoded by nucleic acid molecules of Group I include SEQ ID NO:'s 10 and 13.

II. Election of DNA Sequences

The Examiner has required Applicants to elect a single DNA sequence for examination, stating the disclosure contains many DNA sequences having different structures. Applicants have elected SEQ ID NO:12, with traverse.

Applicants request the DNA sequences represented by SEQ ID NO's 9, 11, 12, 14, 15 and 16 be included in the Examiner's review of the instant Application since all of these sequences either represent the full length COX-1 cDNA, it's complement or fragments thereof. SEQ ID NO:12 represents the nucleic acid sequence of the full-length canine COX-1 cDNA while SEQ ID NO:14 represents the reverse complement of SEQ ID NO:12. The coding sequence from SEQ ID NO:12 is represented by SEQ ID NO:15, whereas SEQ ID NO:16 represents the reverse complement of SEQ ID NO:15. Thus, all of these sequences are identical in their overlapping regions. Similarly, SEQ ID NO:9 represents a 275 nucleotide fragment from SEQ ID NO:12, the complement of which is represented by SEQ ID NO:11. For the Examiner's convenience, Applicants have included (as Exhibit A) an alignment showing the relationship between the claimed canine COX-1 coding strands (SEQ ID NO's 9, 12 and 15). This alignment makes it clear these sequences are identical in their overlapping regions. Furthermore, as noted above, SEQ ID NO's 11, 14 and 16 are the respective complements of the aligned sequences and are thus also identical to each other in their overlapping regions.

The MPEP §803.04, paragraph 3, states "...nucleotide sequences encoding the same protein are not considered to be independent and distinct inventions and will continue to be examined together." Additionally, the MPEP at §803 states that for restriction to be appropriate, "there must be a serious burden on the Examiner if restriction is not required." The SEQ ID NO's in the instant Application clearly encode, or are complements of sequences that encode, the same protein. Thus Applicants request examination of SEQ ID NO's 9, 11, 12 and 14-16 since Applicants contend such examination would not constitute a serious burden on the Examiner.

CONCLUSION

All of the pending Claims are believed to be in condition for allowance. In the event the Examiner has any questions regarding this Application, the Examiner is invited to contact the undersigned representative at (970) 493-7272, ext. 4174.

Respectfully submitted,

Dated: April 27, 2006

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Exhibit A

```
Name: SIN9  Len: 275
Name: SIN12 Len: 2693
Name: SIN15 Len: 1899

SIN9  .......... .......... .......... .......... ..........
SIN12 gcaccccgag cgcagcagcc gcccagagct ATGAGCCGTG AGTTCGACCC
SIN15 .......... .......... .......... ATGAGCCGTG AGTTCGACCC

SIN9  .......... .......... .......... .......... ..........
SIN12 TGAGGCCCCC AGGAACCCTC TTCGCCTCCC GGGGGAGCCT CGAATGCCAG
SIN15 TGAGGCCCCC AGGAACCCTC TTCGCCTCCC GGGGGAGCCT CGAATGCCAG

SIN9  .......... .......... .......... .......... ..........
SIN12 GCCCAGCCCT CACCTCTCGC TCCGCAGGGG GGAGTCGCCT GCACCGGTGG
SIN15 GCCCAGCCCT CACCTCTCGC TCCGCAGGGG GGAGTCGCCT GCACCGGTGG

SIN9  .......... .......... .......... .......... ..........
SIN12 CCGCTGCTCC TGCTGCTGCT GCTGCTGCTG CCGCCGCCCC CGGTCCTGCC
SIN15 CCGCTGCTCC TGCTGCTGCT GCTGCTGCTG CCGCCGCCCC CGGTCCTGCC

SIN9  .......... .......... .......... .......... ..........
SIN12 CGCGGAAGCC CGGACCCCGG CGCCTGTGAA CCCGTGTTGT TACTACCCAT
SIN15 CGCGGAAGCC CGGACCCCGG CGCCTGTGAA CCCGTGTTGT TACTACCCAT

SIN9  .......... .......... .......... .......... ..........
SIN12 GTCAGCACCA AGGGATCTGT GTCCGCTTCG GCCTTGACCG CTACCAGTGT
SIN15 GTCAGCACCA AGGGATCTGT GTCCGCTTCG GCCTTGACCG CTACCAGTGT

SIN9  .......... .......... .......... .......... ..........
SIN12 GACTGCACCC GCACGGGCTA TTCTGGCCCC AACTGCACCA TCCCCGAGCT
SIN15 GACTGCACCC GCACGGGCTA TTCTGGCCCC AACTGCACCA TCCCCGAGCT

SIN9  .......... .......... .......... .......... ..........
SIN12 GTGGACCTGG CTCCGGAATT CACTGCGCCC CAGTCCCTCT TTCCTCCACT
SIN15 GTGGACCTGG CTCCGGAATT CACTGCGCCC CAGTCCCTCT TTCCTCCACT

SIN9  .......... .......... .......... .......... ..........
SIN12 TCCTGCTGAC GCATGGGCGC TGGTTTTGGG AATTCATCAA TGCCACCTTC
SIN15 TCCTGCTGAC GCATGGGCGC TGGTTTTGGG AATTCATCAA TGCCACCTTC

SIN9  .......... .......... .......... .......... ..........
SIN12 ATCCGTGACA TGCTCATGCG TCTGGTACTC ACAGCGCGTT CCAACCTTAT
SIN15 ATCCGTGACA TGCTCATGCG TCTGGTACTC ACAGCGCGTT CCAACCTTAT

SIN9  .......... .......... .......... .......... ..........
SIN12 CCCCAGTCCT CCCACCTACA ACATAGCGCA TGACTACATC AGCTGGGAGT
SIN15 CCCCAGTCCT CCCACCTACA ACATAGCGCA TGACTACATC AGCTGGGAGT

SIN9  .......... .......... .......... .......... ..........
SIN12 CCTTCTCCAA TGTGAGCTAT TACACTCGTG TTCTGCCCTC TGTGCCCCAA
SIN15 CCTTCTCCAA TGTGAGCTAT TACACTCGTG TTCTGCCCTC TGTGCCCCAA

SIN9  .......... .......... .......... .......... ..........
SIN12 GATTGCCCCA CGCCCATGGG GACCAAAGGG AAGAAGCAGT TGCCAGACGC
SIN15 GATTGCCCCA CGCCCATGGG GACCAAAGGG AAGAAGCAGT TGCCAGACGC
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SIN9   .......... .......... .......... .......... ..........
SIN12  CCAACTCCTG GGCCGTCGCT TCCTGCTCAG GAGGAAGTTC ATACCTGACC
SIN15  CCAACTCCTG GGCCGTCGCT TCCTGCTCAG GAGGAAGTTC ATACCTGACC

SIN9   .......... .......... .........T TTGCACAACA CTTCACCCAC
SIN12  CCCAAGGCAC CAACCTCATG TTCGCCTTCT TTGCACAACA CTTCACCCAT
SIN15  CCCAAGGCAC CAACCTCATG TTCGCCTTCT TTGCACAACA CTTCACCCAT

SIN9   CAGTTCTTCA AAACTTCTGG CAAGATGGGT CCTGGCTTCA CCAAGGCCTT
SIN12  CAGTTCTTCA AAACTTCTGG CAAGATGGGT CCTGGCTTCA CCAAGGCCTT
SIN15  CAGTTCTTCA AAACTTCTGG CAAGATGGGT CCTGGCTTCA CCAAGGCCTT

SIN9   GGGCCATGGG GTAGATCTTG GTCACATTTA TGGGGACAAT CTGGACCGTC
SIN12  GGGCCATGGG GTAGATCTTG GCCACATTTA TGGGGACAAT CTGGACCGTC
SIN15  GGGCCATGGG GTAGATCTTG GCCACATTTA TGGGGACAAT CTGGACCGTC

SIN9   AGTATCAGCT GCGGCTCTTT AAGGATGGGA AACTCAAGTA TCAGGTTCTG
SIN12  AGTATCAGCT GCGGCTCTTT AAGGATGGGA AACTCAAGTA TCAGGTTCTG
SIN15  AGTATCAGCT GCGGCTCTTT AAGGATGGGA AACTCAAGTA TCAGGTTCTG

SIN9   GATGGAGAGA TGTACCCGTC ATCTGTGGAG GAGGCGCCTG TGTTGATGCA
SIN12  GATGGAGAGA TGTACCCGCC ATCTGTGGAG GAGGCGCCTG TGTTGATGCA
SIN15  GATGGAGAGA TGTACCCGCC ATCTGTGGAG GAGGCGCCTG TGTTGATGCA

SIN9   CTACCCACGG GGCATTCTGC CCCAGAGTCA GATGGCTGTG GGCCAGGAGG
SIN12  CTACCCACGG GGCATTCTGC CCCAGAGTCA GATGGCCGTG GGCCAGGAGG
SIN15  CTACCCACGG GGCATTCTGC CCCAGAGTCA GATGGCCGTG GGCCAGGAGG

SIN9   TGTT...... .......... .......... .......... ..........
SIN12  TGTTTGGGCT GCTTCCTGGG CTCATGCTCT ATGCCACGCT CTGGCTGCGT
SIN15  TGTTTGGGCT GCTTCCTGGG CTCATGCTCT ATGCCACGCT CTGGCTGCGT

SIN9   .......... .......... .......... .......... ..........
SIN12  GAGCACAATC GTGTGTGTGA CCTGCTGAAG GCTGAGCACC CCACTTGGGG
SIN15  GAGCACAATC GTGTGTGTGA CCTGCTGAAG GCTGAGCACC CCACTTGGGG

SIN9   .......... .......... .......... .......... ..........
SIN12  TGATGAGCAA CTCTTCCAGA CGGCCCGACT CATCCTCATT GGGGAGACCA
SIN15  TGATGAGCAA CTCTTCCAGA CGGCCCGACT CATCCTCATT GGGGAGACCA

SIN9   .......... .......... .......... .......... ..........
SIN12  TCAAGATTGT GATTGAGGAG TATGTGCAGC AGCTGAGTGG CTACTTCTTG
SIN15  TCAAGATTGT GATTGAGGAG TATGTGCAGC AGCTGAGTGG CTACTTCTTG

SIN9   .......... .......... .......... .......... ..........
SIN12  CAGCTGAAGT TCGACCCGGA GCTGCTGTTT AGCGCCCAGT TCCAGTACCG
SIN15  CAGCTGAAGT TCGACCCGGA GCTGCTGTTT AGCGCCCAGT TCCAGTACCG

SIN9   .......... .......... .......... .......... ..........
SIN12  CAACCGCATC GCCATGGAGT TCAACCAGCT GTACCACTGG CACCCGCTCA
SIN15  CAACCGCATC GCCATGGAGT TCAACCAGCT GTACCACTGG CACCCGCTCA

SIN9   .......... .......... .......... .......... ..........
SIN12  TGCCAGACTC CTTCTGGGTG GGTTCCCAGG AGTACAGCTA TGAGCAGTTC
SIN15  TGCCAGACTC CTTCTGGGTG GGTTCCCAGG AGTACAGCTA TGAGCAGTTC

SIN9   .......... .......... .......... .......... ..........
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SIN12 CTGTTCAACA CCTCCATGCT GACGCACTAC GGGATCGAGG CCCTGGTGGA
SIN15 CTGTTCAACA CCTCCATGCT GACGCACTAC GGGATCGAGG CCCTGGTGGA

SIN9  .......... .......... .......... .......... ..........
SIN12 TGCCTTCTCT CGCCAGAGCG CCGGCCGGAT TGGTGGAGGT AGAAACATAG
SIN15 TGCCTTCTCT CGCCAGAGCG CCGGCCGGAT TGGTGGAGGT AGAAACATAG

SIN9  .......... .......... .......... .......... ..........
SIN12 ACCACCATGT CCTGCACGTG GCTGTGGAAA CCATCAAGGA ATCCCGCGAG
SIN15 ACCACCATGT CCTGCACGTG GCTGTGGAAA CCATCAAGGA ATCCCGCGAG

SIN9  .......... .......... .......... .......... ..........
SIN12 TTGCGGCTGC AGCCCTTCAA TGAGTACCGC AAGAGGTTTG GCATGAGGCC
SIN15 TTGCGGCTGC AGCCCTTCAA TGAGTACCGC AAGAGGTTTG GCATGAGGCC

SIN9  .......... .......... .......... .......... ..........
SIN12 CTACATGTCC TTCCAGGAAC TCACAGGGGA GAAGGAGATG GCAGCCGAGT
SIN15 CTACATGTCC TTCCAGGAAC TCACAGGGGA GAAGGAGATG GCAGCCGAGT

SIN9  .......... .......... .......... .......... ..........
SIN12 TGGAGGAGCT GTATGGAGAC ATTGATGCCT TGGAATTCTA CCCGGGGCTT
SIN15 TGGAGGAGCT GTATGGAGAC ATTGATGCCT TGGAATTCTA CCCGGGGCTT

SIN9  .......... .......... .......... .......... ..........
SIN12 CTTCTGGAGA AGTGCCATCC AAACTCCATC TTTGGAGAGA GTATGATAGA
SIN15 CTTCTGGAGA AGTGCCATCC AAACTCCATC TTTGGAGAGA GTATGATAGA

SIN9  .......... .......... .......... .......... ..........
SIN12 AATTGGGGCT CCCTTCTCCC TTAAGGGCCT CCTAGGGAAT CCCATCTGTT
SIN15 AATTGGGGCT CCCTTCTCCC TTAAGGGCCT CCTAGGGAAT CCCATCTGTT

SIN9  .......... .......... .......... .......... ..........
SIN12 CTCCAGAGTA CTGGAAGCCA AGCACATTCG GTGGTGAGAT GGGCTTCAAT
SIN15 CTCCAGAGTA CTGGAAGCCA AGCACATTCG GTGGTGAGAT GGGCTTCAAT

SIN9  .......... .......... .......... .......... ..........
SIN12 ATGGTCAAGA CAGCCACACT GAAGAAGCTG GTCTGCCTTA ACACCAAGAC
SIN15 ATGGTCAAGA CAGCCACACT GAAGAAGCTG GTCTGCCTTA ACACCAAGAC

SIN9  .......... .......... .......... .......... ..........
SIN12 TTGTCCCTAT GTTTCCTTCC GTGTGCCTGA CCCCCACCAG GATGGCGGGC
SIN15 TTGTCCCTAT GTTTCCTTCC GTGTGCCTGA CCCCCACCAG GATGGCGGGC

SIN9  .......... .......... .......... .......... ..........
SIN12 CTGGTGTGGA GCGGCCGTCC ACAGAGCTCt gagggggcag agcagcagca
SIN15 CTGGTGTGGA GCGGCCGTCC ACAGAGCTC. .......... ..........

SIN9  .......... .......... .......... .......... ..........
SIN12 ttctggaggg tggacttgtc atcccagaat gctgaggctg gggttaataa
SIN15 .......... .......... .......... .......... ..........

SIN9  .......... .......... .......... .......... ..........
SIN12 tcccaaatgt tgggtctttg gtttgcctca agaatatcaa ggtcaacatt
SIN15 .......... .......... .......... .......... ..........

SIN9  .......... .......... .......... .......... ..........
SIN12 tagaactttg tgtctctcac ccattatctg gaatatcatg gtcttgtttg
SIN15 .......... .......... .......... .......... ..........
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SIN9  .......... .......... .......... .......... ..........
SIN12 ttattctaga atgctgaatt cctggttgac catctagaat ggatggagtg
SIN15 .......... .......... .......... .......... ..........

SIN9  .......... .......... .......... .......... ..........
SIN12 atgcttcttt ggcaagccag aacactggtt cctggccgac aacctagaat
SIN15 .......... .......... .......... .......... ..........

SIN9  .......... .......... .......... .......... ..........
SIN12 gtcagacttc tggttgactt aagacgtagg cattctctaa tgtgaagctc
SIN15 .......... .......... .......... .......... ..........

SIN9  .......... .......... .......... .......... ..........
SIN12 ctgacagaat catctagaaa gataggggat tcttattttg cattctagaa
SIN15 .......... .......... .......... .......... ..........

SIN9  .......... .......... .......... .......... ..........
SIN12 ttctgggcag ccctccagca tgttgatttt tttcactggc agttcagaat
SIN15 .......... .......... .......... .......... ..........

SIN9  .......... .......... .......... .......... ..........
SIN12 gttgtgctct tgattgctga tccaaaatag tggctggtat gccagatcag
SIN15 .......... .......... .......... .......... ..........

SIN9  .......... .......... .......... .......... ..........
SIN12 tcttgctctg aatgcctaga atggtaattt gattcatttt cctgttcagt
SIN15 .......... .......... .......... .......... ..........

SIN9  .......... .......... .......... .......... ..........
SIN12 gagatacccc caaagcagga gaatctacag cctaaccaga gtgcattgcc
SIN15 .......... .......... .......... .......... ..........

SIN9  .......... .......... .......... .......... ..........
SIN12 tgcctctgtg cctgccccaa ggacttaggg ggcagagtgt tcttcctggg
SIN15 .......... .......... .......... .......... ..........

SIN9  .......... .......... .......... .......... ..........
SIN12 atgctgactc agaccctggt ccaaggagat agaacaggtg ggctttttcc
SIN15 .......... .......... .......... .......... ..........

SIN9    .......... .......... .......... .......... ..........
SIN12 aggtcattgg ttggaggcca ccagagctct gttgccatct ttgtcttgac
SIN15 .......... .......... .......... .......... ..........

SIN9    .......... .......... .......... .......... ...
SIN12 tcatgacagc tgtttctcat gaaactaata aaattttttt tcc
SIN15 .......... .......... .......... .......... ...
```